AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Please amend claims 1 – 5, 11, 13, 17, 18, 22, 24, 28, 29, 32, 34, 38, 39, 42, 43, 45, 47 – 51 and 54 – 58, inclusive, and cancel claim 19, as follows:

1 (Currently Amended). A system for implementing a system acquisition function to facilitate PN code searching, comprising:

a PN sequence generator adapted ~~configured~~ to generate sequentially a plurality of PN sequences, the plurality of PN sequences comprising a first PN sequence and a second PN sequence immediately following the first PN sequence, a start of the second PN sequence determined by shifting the first PN sequence; and

a plurality of computational units each adapted ~~configurable~~ to correlate a received signal sample with a corresponding PN sequence of the plurality of PN sequences generated by the PN sequence generator, the correlations being executed in parallel. ~~a parallel manner;~~

~~wherein a number of computational units from the plurality of computational units are selectively configured to correlate the received signal sample with the PN sequence, the number of computational units which are selectively configured to correlate the received signal with the PN sequence depends on availability of the plurality of computational units.~~

2 (Currently Amended). The system according to claim 1 wherein a number of computational units from the plurality of computational units which are selectively configured to correlate the received signal sample with the corresponding PN sequence depends upon availability of the plurality of computational units. ~~the plurality of PN sequences are generated in a sequential manner;~~

~~wherein the plurality of PN sequences includes a first PN sequence and a second PN sequence, the second PN sequence immediately following the first PN sequence; and~~

~~wherein the start of the second PN sequence is determined by shifting the first PN sequence.~~

3 (Currently Amended). The system according to claim 2 ~~claim 1~~ wherein the PN sequence has M components; and

wherein the number of computational units selectively configured to correlate the received signal sample with the PN sequence is M or smaller.

4 (Currently Amended). The system according to claim 3 wherein the number of computational units selectively configured to correlate the received signal sample with the PN sequence is capable of being reduced when [[if]] a clock rate driving the plurality of computational units is increased.

5 (Currently Amended). The system according to claim 3 wherein the number of computational units selectively configured to correlate the received signal with the PN sequence is capable of being reduced when [[if]] the availability of the plurality of computational units is reduced.

6 (Original). The system according to claim 1 wherein the received signal sample is correlated with the PN sequence as soon as the received signal sample is received.

7 (Original). The system according to claim 6 wherein after correlating the received signal sample with the PN sequence, the received signal sample is discarded.

8 (Original). The system according to claim 1 wherein one or more of the plurality of computational units are configurable to implement another function when the PN code searching is not needed.

9 (Original). The system according to claim 1 wherein the system acquisition function is performed by a communication device.

10 (Original). The system according to claim 9 wherein the communication device is a mobile phone for use in a CDMA communication system.

11 (Currently Amended). A system acquisition module for facilitating PN code searching, comprising:

a PN sequence generator configurable ~~configured~~ to generate a plurality of PN sequences; and

a plurality of computational units configurable to perform a first function of correlating each received signal sample of ~~correlate~~ a plurality of received signal samples with a corresponding PN sequence of the plurality of PN sequences and further configurable to perform a second function; and

~~wherein each of the plurality of received signal samples is correlated with a corresponding one of the plurality of PN sequences; and~~

wherein a number of computational units from the plurality of computational units which are selectively configured to correlate the plurality of received signal samples with the plurality of PN sequences~~, the number of computational units which are selectively configured to correlate the plurality of received signal samples with the plurality of PN sequences depends on~~ depends upon availability of the plurality of computational units.

12 (Original). The system acquisition module according to claim 11 wherein the plurality of received signal samples is received in a sequential manner;

wherein the plurality of PN sequences is generated in a sequential order and starting positions of any two adjacent PN sequences are offset by a chip.

13 (Currently Amended). The system acquisition module according to claim 12 wherein the plurality of PN sequences includes a first PN sequence and a ~~second PN sequence, the~~ second PN sequence immediately following the first PN sequence; and

wherein the start of the second PN sequence is determined by shifting the first PN sequence.

14 (Original). The system acquisition module according to claim 12 wherein each of the plurality of received signal samples is correlated with the corresponding one of the plurality of PN sequences as soon as each of the plurality of received signal samples is received.

15 (Original). The system acquisition module according to claim 14 wherein after correlating a received signal sample with a corresponding PN sequence, the received signal sample is discarded.

16 (Original). The system acquisition module according to claim 11 wherein each of the plurality of PN sequences has M components; and

wherein the number of computational units selectively configured to correlate the plurality of received signal samples with the plurality of PN sequences is M.

17 (Currently Amended). The system acquisition module according to claim 11 wherein the number of computational units which are selectively configured to correlate the plurality of received signal samples with the plurality of PN sequences is capable of being reduced when **[[if]]** a clock rate driving the plurality of computational units is increased.

18 (Currently Amended). The system acquisition module according to claim 11 wherein the number of computational units which are selectively configured to correlate the plurality of received signal samples with the plurality of PN sequences is capable of being reduced when **[[if]]** the availability of the plurality of computational units is reduced.

19 (Cancelled).

20 (Original). The system acquisition module according to claim 11 wherein the system acquisition module is located in a communication device.

21 (Original). The system acquisition module according to claim 20 wherein the communication device is a mobile phone for use in a CDMA communication system.

22 (Currently Amended). A communication device having a system acquisition function, comprising:

a receiver adapted ~~configured~~ to receive a plurality of signal samples;

a first plurality of configurable computational units, one or more of the configurable computational units of the first plurality selectively configurable to implement a PN sequence generator ~~configured~~ to generate a plurality of PN sequences, ~~the PN sequence generator being implemented by selectively using one or more of a first plurality of configurable computational units~~ the plurality of PN sequences comprising a first PN sequence and a second PN sequence immediately following the first PN sequence, a start of the second PN sequence determined by shifting the first PN sequence; and

a second plurality of configurable computational units, one or more of the configurable computational units of the second plurality selectively configurable to implement a correlator ~~configured~~ to correlate the plurality of signal samples with the plurality of PN sequences. ~~sequences, the correlator being implemented by selectively using one or more of a second plurality of configurable computational units, the number of configurable computational units to be selectively used to implement the correlator depending on availability of the second plurality of configurable computational units.~~

23 (Original). The communication device according to claim 22 wherein the plurality of signal samples is received in a sequential manner;

wherein the plurality of PN sequences is generated in a sequential order; and

wherein each of the plurality of signal samples is correlated with a corresponding one of the plurality of PN sequences.

24 (Currently Amended). The communication device according to claim 23 wherein a number of configurable computational units selectively configured to implement the correlator depends upon availability of the second plurality of configurable computational units. ~~the plurality of PN sequences includes a first PN~~

~~sequence and a second PN sequence, the second PN sequence immediately following the first PN sequence; and~~

~~wherein the start of the second PN sequence is determined by shifting the first PN sequence.~~

25 (Original). The communication device according to claim 23 wherein each of the plurality of signal samples is correlated with the corresponding one of the plurality of PN sequences as soon as each of the plurality of signal samples is received.

26 (Original). The communication device according to claim 25 wherein after correlating a signal sample with a corresponding PN sequence, the signal sample is discarded.

27 (Original). The communication device according to claim 22 wherein each of the plurality of PN sequences has M components; and

wherein the number of configurable computational units to be selectively used to implement the correlator to correlate the plurality of signal samples with the plurality of PN sequences is M.

28 (Currently Amended). The communication device according to claim 22 wherein the number of configurable computational units which are to be selectively used to implement the correlator to correlate the plurality of signal samples with the plurality of PN sequences is capable of being reduced when [[if]] a clock rate driving the second plurality of configurable computational units is increased.

29 (Currently Amended). The communication device according to claim 22 wherein the number of configurable computational units which are to be selectively used to implement the correlator to correlate the plurality of signal samples with the plurality of PN sequences is capable of being reduced when [[if]] the availability of the second plurality of configurable computational units is reduced.

30 (Original). The communication device according to claim 22 wherein one or more of the second plurality of configurable computational units are configurable to implement another function when the system acquisition function is not needed.

31 (Original). The communication device according to claim 22 wherein the communication device is a mobile phone for use in a CDMA communication system.

32 (Currently Amended). A communication device having a system acquisition function, comprising:

a receiver configured to receive a plurality of signals;

a plurality of configurable computational units selectively configurable to implement a PN sequence generator ~~configured~~ to generate a plurality of PN sequences and further selectively configurable to implement a correlator ~~sequences, the PN sequence generator being implemented by selectively using one or more of a plurality of configurable computational units; and~~

~~a correlator configured~~ to correlate the plurality of signals with the plurality of PN sequences; ~~sequences, the correlator being implemented by selectively using one or more of the plurality of configurable computational units;~~

wherein the number of configurable computational units selectively configured ~~to be selectively used~~ to implement the correlator depends upon ~~depend on~~ availability of the plurality of configurable computational units.

33 (Original). The communication device according to claim 32 wherein the plurality of signals is received in a sequential manner;

wherein the plurality of PN sequences is generated in a sequential order; and

wherein each of the plurality of signals is correlated with a corresponding one of the plurality of PN sequences.

34 (Currently Amended). The communication device according to claim 33 wherein the plurality of PN sequences includes a first PN sequence and a second PN sequence~~, the second PN sequence~~ immediately following the first PN sequence; and

wherein the start of the second PN sequence is determined by shifting the first PN sequence.

35 (Original). The communication device according to claim 32 wherein each of the plurality of signals is correlated with the corresponding one of the plurality of PN sequences as soon as each of the plurality of signals is received.

36 (Original). The communication device according to claim 35 wherein after correlating a signal with a corresponding PN sequence, the signal is discarded.

37 (Original). The communication device according to claim 32 wherein each of the plurality of PN sequences has M components; and

wherein the number of configurable computational units to be selectively used to implement the correlator to correlate the plurality of signals with the plurality of PN sequences is M or smaller.

38 (Currently Amended). The communication device according to claim 32 wherein the number of configurable computational units which are to be selectively used to implement the correlator to correlate the plurality of signals with the plurality of PN sequences is capable of being reduced when [[if]] a clock rate driving the plurality of configurable computational units is increased.

39 (Currently Amended). The communication device according to claim 32 wherein the number of configurable computational units which are to be selectively used to implement the correlator to correlate the plurality of signals with the plurality of PN sequences is capable of being reduced when [[if]] the availability of the plurality of configurable computational units is reduced.

40 (Original). The communication device according to claim 32 wherein one or more of the plurality of configurable computational units are configurable to implement another function when the system acquisition function is not needed.

41 (Original). The communication device according to claim 32 wherein the communication device is a mobile phone for use in a CDMA communication system.

42 (Currently Amended). A system for implementing a system acquisition function to facilitate PN code searching, comprising:

a PN sequence generator configured to generate a plurality of PN sequences comprising a corresponding plurality of PN codes; and ~~codes, one or more PN codes making up a PN sequence; and~~

a plurality of computational units selectively configurable to correlate a plurality of received signals with the plurality ~~a plurality~~ of PN sequences;

~~wherein a number of computational units from the plurality of computational units are selectively configured to correlate the plurality of received signals;~~

wherein for each received signal, each configured computational unit adapted to correlate ~~correlates~~ the received signal with a corresponding PN code of a first PN sequence and store ~~stores~~ a correlation result, all the configured computational units adapted to perform their respective correlations upon receiving the received signal and in parallel; and ~~a parallel manner.~~

wherein after each received signal is correlated, the PN sequence generator is further adapted to generate a second PN sequence by shifting the first PN sequence and adding an additional PN code.

43 (Currently Amended). The system of claim 42 wherein ~~after each received signal is correlated, a second PN sequence is generated by shifting the first PN sequence and adding an additional PN code; and~~

~~wherein~~ upon receiving a next received signal, each configured computational unit correlates the next received signal with a corresponding PN code of the second PN sequence and accumulates a correlation result with the correlation result from the previously correlated received signal.

44 (Original). The system of claim 42 wherein the number of configured computational units is scalable.

45 (Currently Amended). The system of claim 42 wherein the number of configured computational units is capable of being reduced when [[if]] performance of the plurality of computational units is increased.

46 (Original). The system of claim 42 wherein after each received signal is correlated, the received signal is discarded.

47 (Currently Amended). A method for implementing a system acquisition function to facilitate PN code searching, comprising:

maintaining a plurality of configurable computational units;

receiving a plurality of signals;

configuring one or more of the plurality of configurable computational units to implement a PN sequence generator to sequentially generate a plurality of PN sequences comprising a first PN sequence and second PN sequence immediately following the first PN sequence, and to determine a start of the second PN sequence by shifting the first PN sequence;

configuring one or more of the plurality of configurable computational units to implement a correlator to correlate the plurality of signals with the plurality of PN sequences; and

correlating each one of the plurality of signals with a corresponding one of the plurality of PN sequences at the time when each one of the plurality of signals is received. ~~received;~~

~~wherein the number of configurable computational units used to implement the correlator depends on availability of the plurality of configurable computational units.~~

48 (Currently Amended). The method of claim 47 further comprising configuring a number of configurable computational units to implement the correlator depending upon availability of the plurality of configurable computational units. ~~further comprising:~~

~~generating the plurality of PN sequences in a sequential manner, wherein the plurality of PN sequences include a first PN sequence and second PN sequence, the~~

~~second PN sequence immediately following the first PN sequence, and wherein the start of the second PN sequence is determined by shifting the first PN sequence.~~

49 (Currently Amended). The method of claim 47 ~~wherein~~ further comprising reducing the number of configurable computational units used to implement the correlator ~~is capable of being reduced~~ when **[[**if**]]** a clock rate driving the plurality of configurable computational units is increased.

50 (Currently Amended). The method of claim 47 further comprising reducing ~~wherein~~ the number of configurable computational units used to implement the correlator ~~is capable of being reduced~~ when **[[**if**]]** the availability of the plurality of configurable computational units is reduced.

51 (Currently Amended). The method of claim 47 further comprising configuring ~~wherein~~ one or more of the plurality of configurable computational units ~~are configurable~~ to implement another function when the system acquisition function is not needed.

52 (Original). A communication device utilizing the method of claim 47.

53 (Original). The method of claim 52 wherein the communication device is a mobile phone for use in a CDMA communication system.

54 (Currently Amended). A method for implementing a system acquisition function to facilitate PN code searching, comprising:

generating a first PN sequence comprising ~~, the first PN sequence being made up of~~ a plurality of PN codes;

receiving a first signal;

correlating the first signal with the first PN sequence upon receiving the first signal;

storing a correlation result from the correlation between the first signal and the first PN sequence;

generating a second PN sequence by shifting the first PN sequence and adding an additional PN code;

receiving a second signal;

correlating the second signal with the second PN sequence;

accumulating a correlation result from the correlation between the second signal and the second PN sequence with the correlation result from the correlation between the first signal and the first PN sequence; and

repeating the above generating, receiving, correlating and accumulating steps with each received signal and each newly generated PN sequence.

55 (Currently Amended). The method of claim 54 wherein the generating step further comprises:

configuring one or more of a plurality of configurable computational units to implement the generation function; and

wherein the correlating step further comprises:

configuring a number ~~one or more~~ of the plurality of configurable computational units to implement the correlation function depending upon~~, the number of configurable computational units to be configured to implement the correlation function depends on~~ the availability of the plurality of configurable computational units.

56 (Currently Amended). The method of claim 55 further comprising reducing ~~wherein~~ the number of configurable computational units ~~to be~~ configured to implement the correlation function when ~~is capable of being reduced if~~ a clock rate driving the plurality of configurable computational units is increased.

57 (Currently Amended). The method of claim 55 further comprising reducing ~~wherein~~ the number of configurable computational units ~~to be~~ configured to implement the correlation function when ~~is capable of being reduced if~~ the availability of the plurality of configurable computational units is reduced.

58 (Currently Amended). The method of claim 55 further comprising configuring ~~wherein~~ one or more of the plurality of configurable computational units ~~are configurable~~ to implement another function when the system acquisition function is not needed.